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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,431	12/10/2003	Kenji Kurata	492322015100	5131
25227	7590	08/07/2006	EXAMINER	
MORRISON & FOERSTER LLP 1650 TYSONS BOULEVARD SUITE 300 MCLEAN, VA 22102			CAZAN, LIVIUS RADU	
			ART UNIT	PAPER NUMBER
			3729	

DATE MAILED: 08/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/731,431	Applicant(s) KURATA ET AL.	
	Examiner Livius R. Cazan	Art Unit 3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 7-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/10/05, 12/10/03</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election without traverse of Species A, claims 1-6 in the reply filed on 7/18/2006 is acknowledged.
2. Claims 7-9 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made without traverse in the reply filed on 7/18/2006.

***Priority***

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Oath/Declaration***

4. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:  
One of the names on the Oath/Declaration does not match the name on the Application Data Sheet. Ikuo Takemura on the Oath/Declaration appears as lukuo Takemura on the Application Data Sheet, and it is unclear which of the two is incorrect.

***Specification***

5. The disclosure is objected to because of the following informalities: on page 3, line 20, "moves" should read --moved--.

Appropriate correction is required. Applicant is asked to carefully read the specification and correct this and any informalities that may still be present in the application.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 2-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In particular, regarding claim 5, it is unclear how the position of the lower end of the suction nozzle can be measured, since the suction nozzle is missing.

Regarding claims 2-5, it would appear "lower of the suction nozzle" should probably read --lower end of the suction nozzle--.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Takeuchi (US5661239).

Takeuchi discloses:

- A component feeding unit (3, Fig. 2)
- A suction nozzle (14, Fig. 3B)
- A position sensor (75, Figs. 3A, 3B) measuring a vertical position of a lower end of the suction nozzle after the suction nozzle releases an electronic component (A, Fig. 3B) to a printed board (B, Fig. 2); the sensor detects when the nozzle is lower than normal; see col. 2, Ins. 45-60, In. 10 of col. 7 to In. 20 of col. 8; see claim 1
- A decision device judging that the suction nozzle is about to fall when the vertical position of the lower end of the suction nozzle is lower than a predetermined position; see col. 7, Ins. 55-60; clearly a decision device exists, since the apparatus is stopped due to the detection of a low nozzle

10. Claims 1, 5 (as best understood), and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Okuda (US6868603 to Okuda et al.).

Okuda discloses:

- A component feeding unit (9, Fig. 1)
- A suction nozzle (19, Fig. 1)
- A line sensor (20, Fig. 1) measuring a vertical position of a lower end of the suction nozzle after the suction nozzle releases an electronic component (5, Fig. 1) to a printed board (2, Fig. 1); after having placed a component on the previous printed board, the line sensor is used to detect

the presence of a nozzle before the start of a new mounting operation; see Fig. 4, step S4 in particular; see col. 6, lns. 55-67

- A decision device (500, Fig. 1) judging that the suction nozzle is missing when the sensor does not detect a lower end of the nozzle (see step S4, Fig. 4)

11. Claims 1, 2, 3, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Kano (US5539977 to Kano et al.)

Kano discloses:

- A component feeding unit (7, Fig. 2)
- A suction nozzle (14, Fig. 4)
- A line sensor (27, Fig. 4) measuring a vertical position of a lower end of the suction nozzle after the suction nozzle releases an electronic component (5, Fig. 4) to a printed board (6, Fig. 2); note that the sensor 27 outputs a measured value continuously, therefore both before and after mounting operations (see col. 6, lns. 45-51)
- A drive source (see col. 4, lns. 50-55; mechanism which allows the nozzle to be lowered as described) moving the suction nozzle vertically
- A control device (31, Fig. 5) determining a range of a vertical movement of the suction nozzle based on the vertical position of the lower end of the suction nozzle measured by the position sensor; see ln. 65 of col. 7 to ln. 3 of col. 8

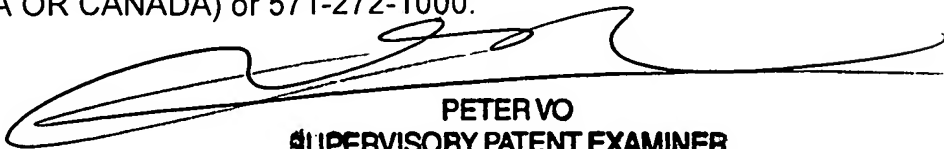
- A decision device (31, Fig. 5) judging that the suction nozzle holds the electronic component when the vertical position of the lower end of the suction nozzle measured by the position sensor is lower than a predetermined position; see col. 7, lns. 20-36; if the lowest measured value falls within the proper part thickness plus nozzle lower end position, then the part is present

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Livius R. Cazan whose telephone number is (571) 272-8032. The examiner can normally be reached on 7:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on (571)272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
**PETER VO**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 3700**

LRC 8/2/2006